

SAN DIEGO FIRE WEATHER



2010

ANNUAL SUMMARY

RED FLAG WARNING VERIFICATION FOR 2010

In 2010, there were 8 days in the County Warning Area assigned to National Weather Service Forecast Office San Diego on which Fire Weather Watches/Red Flag Warnings were in effect and/or Fire Weather Events were occurring. The number of watches and warnings decreased significantly this year. First, the low relative humidity only criterion ($RH < 10\%$ for 10 hours or more) was dropped in 2010, resulting in less Red Flag Warnings as well as shorter duration warnings. Second, significant early season rainfall kept live fuel moistures above critical levels for much of the fall when we typically have synoptic fire weather events. This office issued a total of 6 Fire Weather Watches and 13 Red Flag Warnings during these days. None of the Fire Weather Watches in 2010 were followed by Red Flag Warnings that verified. Less than half of all the Red Flag Warnings issued verified. Three unverified warnings were for synoptic events (sustained winds ≥ 25 mph and/or gusts ≥ 35 mph and $RH \leq 15\%$ for 6 hours or more) Two of the missed events were from a dry lightning outbreak on September 29th. The third was for a synoptic event on November 13th. A Fire Weather Watch and Red Flag Warning were issued for this event, but the Red Flag Warning was cancelled before going into effect.

2010 Red Flag Warning Totals			
Total # of Warnings	13	POD	0.63
Total # of Events	8	FAR	0.62
Verified Warnings	5	CSI	0.31
		ALT	
Missed Warnings	3	(Min)	28.63
		ALT	
Unverified Warnings	8	(Hrs)	0.48
		Total	
Watches issued	6	Min	229
Verified Watches	0		
Warnings Preceded by			
Watches	3		

2010 Red Flag Warning Synoptic Totals			
Total # of Warnings	3	POD	0.00
Total # of Events	1	FAR	1.00
Verified Warnings	0	CSI	0.00
		ALT	
Missed Warnings	1	(Min)	0.00
		ALT	
Unverified Warnings	3	(Hrs)	0.00
		Total	
Watches Issued	6	Min	0
Warnings Preceded by			
Watches	3		

2010 Red Flag Warning Dry T-Storm Totals

Total # of Warnings	10	POD	0.71
Total # of Events	7	FAR	0.50
Verified Warnings	5	CSI	0.42
		ALT	
Missed Warnings	2	(Min)	32.71
		ALT	
Unverified Warnings	5	(Hrs)	0.55
		Total	
Watches Issued	0	Min	229
Warnings Preceded by			
Watches	0		

2010 SPOT FORECASTS

Total Spot Forecasts for 2010.....	551
Total Spot Forecasts for Wildfires.....	82
Total Spot Forecasts for Prescribed Burns.....	418
Total Spot Forecasts for Search and Rescue...	47
Total Spot Forecasts for Hazmat.....	4

The National Weather Service in San Diego issued a total of 551 written Spot Forecasts in 2010, supporting a variety of federal, state and local agencies within the district.

Approximately 15 percent of this year's spot forecasts were issued for wildfires. Another 9 percent were in support of other types of Incidents (HAZMAT and SAR).

The majority of Spot Forecasts were issued in support of prescribed burning operations, with approximately 76 percent of the annual total.

INCIDENT METEOROLOGIST (IMET) DISPATCHES FOR 2010

IMET Rob Balfour at the National Weather Service in San Diego participated in 2 IMET dispatches in 2010.

<u>Incident Name</u>	<u>IMET</u>	<u>Dispatch Dates</u>	<u>Fire Weather District</u>
Deepwater Horizon Venice, LA (USCG)	Rob Balfour	11/13 to 11/24/10	Slidell, LA
Via Scott Incident Escondido, CA (San Marcos FD)	Rob Balfour	12/7 to 12/8/10	San Diego, CA

Total Days of IMET support from NWS San Diego: 14 DAYS

Total Number of Dispatches from NWS San Diego: 2 Dispatches

The total time out on dispatches was 14 days, for an average of 7 days per dispatch.

FIRE WEATHER TRAINING 2010

Rob Balfour (IMET) taught the weather portions of the following courses in 2010:

<u>Course Name</u>	<u>Fire Departments/Users</u>	<u>Dates</u>
Intermediate Wildland Fire Behavior (S290)	San Diego City FD	Feb 22-23, 2010
Intermediate Wildland Fire Behavior (S290)	CAL Fire San Bernardino Unit	Mar 2-3, 2010
Wildland Fire Behavior (S390)	Morongo Fire Department	Apr 12-15, 2010

Rob Balfour (IMET) attended the following fire weather and CRC related courses:

IMET Workshop/Refresher Training	NIFC Boise ID	March 22-25, 2010
Annual Level 1 Fire Safety Refresher Training for Incident Support Personnel	Cleveland NF San Diego, CA	April 20, 2010
Fire Behavior Analyst (S590)	Tucson, AZ	March 7-19, 2010
CAMEO/ALOHA/MARPLOT	National Weather Service	March 19, 2010
CRC-S Annual Workshop	Department of Commerce	July 15-16, 2010
DOC CRC Orientation & Reach-back Exercise	Department of Commerce	Sept 12-17, 2010
Reconstruction and Stabilization (RS500)	Department of Commerce	April 26-May 7, 2010

Stefanie Sullivan (IMET Trainee) attended the following fire weather related courses:

Introduction to Wildland Fire Behavior Calculations (S390)	Angeles NF Los Angeles, CA	Feb 8-12, 2010
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ADDITIONAL OUTREACH ACTIVITIES

February 18, 2010 – Jim Purpura and Steve Vanderburg visited the GACC south ops.

March 16, 2010 – Jim Purpura and Steve Vanderburg visited San Diego Gas & Electric to meet with their staff meteorologist and take a tour of their operations area.

July 13, 2010 – Stefanie Sullivan, Jim Purpura (MIC), and Miguel Miller (forecaster) attended a meeting with San Diego Gas & Electric about the installation of 91 new weather stations throughout San Diego County and a small portion of Orange County. These were installed to monitor fire weather conditions, mainly in wind-prone or otherwise poorly sampled areas. We continue to work with SDG&E as they add web cams and rain gauges to their observation network.

September 27, 2010 – Stefanie Sullivan and Jim Purpura participated in a press conference with San Diego City Fire, Cal Fire, USFS, SDPD, and San Diego County Sherriff Department. Jim gave a talk on preparedness and Stefanie provided a seasonal outlook.

ONGOING PROJECTS

Stefanie Sullivan and Ivory Small (SOO) continue to work with Steve Vanderburg (REV) on developing forecast techniques to improve lead time of dry lightning events. Excellent progress has been made in the past year.

WFO San Diego continues to work with San Diego Gas & Electric on their project to better monitor critical fire weather conditions. We frequently coordinate with their meteorologist, Brian D'Agostino, before and during critical fire weather events. Their mesonet data is posted on MesoWest and ingested into AWIPS, which has been a great addition to our observation network. We continue to work with them as they expand their network.

Stefanie Sullivan, Ivory Small, and Jim Purpura may work with LOX and the GACC to create a graphical offshore flow categorization scheme for WFO San Diego's and Oxnard's County Warning Areas. This product would be similar to the GACC's "Offshore Flow Severity Index" map, except with more spatial detail and impact-based. For now the plan is to make this an internal product.